



INNOVATIVE TEACHING METHODOLOGY: STEPS TOWARDS QUALITY ASSURANCE

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ABSTRACT

Teaching in class room using chalk and talk is one way flow of information. Teachers often continuously talk for an hour without knowing students response and feedback. The emphasis in most schools is on exam oriented "learning". The prevalent 'direct teaching' method also known as "factory approach" discourages student curiosity, questioning, innovation and feedback. So there is requirement of innovative methodology for quality assurance in education. For this purpose teacher can use different innovative methods in teaching learning process like student centered pedagogy, extending learning beyond classroom, use of ICT in teaching learning process, project based learning etc.

KEY WORDS: PBL, culture specific pedagogy, concept mapping, community resources, Individualized instruction, Digital Devices.

"Education is the manifestation of perfection already in man"- Swami Vivekananda

The purpose of education is not just making a student literate but adds rationale thinking, knowledgeable and self sufficiency but the emphasis in most Indian schools is on exam oriented "learning". Teaching in class room using chalk and talk is one way flow of information. Teachers often continuously talk for an hour without knowing students response and feedback. The prevalent 'direct teaching' method also known as "factory approach" discourages student curiosity, questioning, innovation and feedback. The "factory based" approach to primary and secondary education, combined with the race to secure a graduate degree, has produced a large number of "graduates" without effective thinking, application, and team work and leadership skills. The explosion in school graduate institutions. This has resulted in fierce competition for limited seats. For example over 120000 candidates compete every year for the 2000 and 3000 seats offered by the prestigious IITs. More emphasis has been given on theory without any practical and real life situations. Learning is more meaningful and real when it is linked to concrete real life objects and situations. This often helps a child transcend her learning gaps and grasp abstract logics and concepts. Traditional methods are not enough to promote adequate level and quality of student learning. In terms of assessment it does not pay enough attention to student's real knowledge and skills. The use of innovative methods in educational institutions has the potential not only to improve education, but also to empower people, strengthen governance and galvanize the effort to achieve the human development goal for the country.

So there is requirement of innovative methodology for quality assurance in education. For this purpose teacher can use different innovative methods in teaching learning process. Some of these are:

- PBL (Project Based Learning):** In this students go through an extended process of inquiry in response to a complex question, problem or challenge. Students gain a deeper understanding of the concepts and standards at the heart of a project. Project also builds vital workplace skills and life long habits of learning. Projects can allow students to address community issues, explore careers, interact with adult mentors, use technology and present their work to audience as beyond the classroom. PBL can motivate students who might otherwise find school boring or meaningless.
- Culture Specific Pedagogy:** NCTE (1998) and NCERT(2000) recommended using culture specific pedagogy in teaching learning process instead of using one uniform mechanistic way of student learning. The cultural practices such as story telling, dramatics, puppetry, folk play, community living should become a strong basis of class room teaching. It is assumed that culture specific pedagogy is a panacea to meet the problem of variation in information processing capacity of the students staying in different parts of country.
- Concept mapping:** Form of teaching is very important in achieving success. Teaching methods and tools should transform knowledge from short term memory to long term memory. Concept mapping is one of the best teaching and learning tools that encourage meaningful learning. Concept maps provide a unique graphical view of how students organize, connect and synthesize information. They include concepts, usually enclosed in circles or boxes of some type and relationship between concepts indicated by a connecting line.
- Information Technology in Education (IT):** IT in education along with our traditional modes can be used for developing: Teaching Learning Materials (TLM) which make the classroom environment lively and conducive to learning. It can be used for individualized learning or self learning, as well. IT can be used in our classrooms in the following ways :-
- Multimedia:** Development in computers, communication, electronics and other Multimedia tools provide a wide range of sensory stimuli. It is said 'I hear and I forget, I see and I remember, I do and I understand.' The animations, simulations, software packages to teach various subjects, speech, music, multimedia networks, image enhancements, etc. create virtual realities and experience for the learners, which in turn, help in making learning a more direct, useful and joyful experience and retain knowledge for a longer time.
- Community resources:** An electronic community allows students to engage in dialogue with each other, their teacher, experts and teachers in different parts of the country or the world. This can be done via two modes namely, asynchronous communication and synchronous communication. In asynchronous communication, exchanges take place in a delayed format. There are a number of activities that can be developed using asynchronous communication like presentations, free flow discussions on a topic, peer reviews, debates, message boards, bulletin boards, e-mails, listing servers, seminars, simulations, feed back on assignments, forums, learner led and threaded discussions. Where as, in a synchronous interactive environment, exchanges take place in real time. Instant messengers, chat rooms, and MOOs are good examples.
- Individualized instruction:** Technology can be used for individualized instruction in order to bridge the gaps between the teaching styles and the learning styles. The use of technology can be made to address the visual learners, auditory learners and kinesthetic learners. In an ordinary classroom with one teacher, it is difficult for the teacher to respond and provide feedback to each student. The programmed instruction models as suggested by Skinner can be used to provide learners learn at their own pace and give immediate feedback.
- Audio-Visuals and Animations:** Audiovisuals, video conferencing, short animations, virtual reality, etc can be used in teaching learning process. The abstract ideas can be focused upon and understood by means of visuals from different point of views. To illustrate the chapters / topics of the respective subjects can be taught by PowerPoint presentations. The Ministry of Human Resource Development, Information and Broadcasting and the Prasar Bharti have launched the Educational TV channel of India 'Gyan Darshan' on 26th January 2000. The Central Institute of Educational Technology a constituent unit of NCERT also provides educational videos and audio programs for various stakeholders at school education level. All these attempts hope to have a positive impact on learning.
- Digital devices:** The digital devices like cameras, scanners can be used for instruction. For instance digital photographs and recordings can be used for electronic and virtual field trips, science experiments and demonstrations, etc. The portable scanners can read text from books, documents, research papers, newspapers and the information scanned can be pasted at ease for reference and documentation. The other digital devices like digital blackboards, electronic pens and touch screens etc. can also be used to enhance

learning. Studies reveal that use of technology motivate students to learn and inspire teacher to explore how best a technology fits into his/her lesson.

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- **Personal Digital Assistants (PDA):** The PDA wireless devices are used as e-learning tools allowing the learners to access information any time, any where. It is observed that, there is a shift from the E-learning to M-learning (which includes learning via. mobile computation). The use of Bluetooth and infrared technologies has made it possible to transfer information in fractions of seconds.
- **Online materials:** The online materials used in the educational setting are as listed below.
- **Database:** Database is a good source of materials put up by the government, libraries and educational institutions. It contains extensive information on graphic interface, websites, electronic page layout, graphics, multimedia and animated designs. The websites like www.intschool-leipzig.com, www.discovery.com, www.nationalgeographic.com, etc. provide information that serve educational purposes.
- **Journals:** There are many e-journals available on the web. Facilitators can include online journals as an integral component of their learning materials with knowledge that can be regularly updated and links that can remain active. Online journals like www.rsc.org, www.journals.cambridge.org, etc., are a good source of information for helping learners to complete projects, assignments and other research work.
- **Software libraries or Digital libraries:** Software libraries learners may download to their own computers. However some websites require specific viewers and plug-ins before learners can view the website. There is a range of software available from many websites on education, which includes downloads for preschool, grade school and high school. The software library includes e-books, interactive CDs and teaching tools. The famous websites like www.chemsoc.org, www.library.thinkquest.org, www.iisc.ernet.in, etc. allow downloads of interactive CDs in various subjects. The knowledge mapping software designed to capture and organize brainstorming sessions into concepts and knowledge webs can also be used. A teacher can pose a problem before the students. The students thereby can create a diagram of ideas, web of ideas using hypertext and hypermedia for assembling and linking information to present their understanding of almost any topic. Simulated software can also be used to explore student's prior knowledge. The student makes choices while interacting with the software. Observing the choices and discussion made by the students enables the teacher to explore the student's prior knowledge and understanding about the same.
- **Online testing:** The teacher may prepare a question bank or an objective type test and place it on the network. The students answer and submit the test. The immediate feedback and scores can be obtained by the student. The evaluation can be done by means of assignments in the form of presentations, documents, and audio visuals, drill and practice, online quiz in various subjects, etc.
- **A school website:** A school website is an innovative way of creating learning environment as well as involving the society in the same. The major components of the classroom website are the home page which is linked to the student page, parent page, teacher page, teaching philosophy page and professional page.

Above mentioned are ways in which technology can be used in educational setting. The technology when used in teaching the curricula subjects like English, Science, Mathematics, Social studies helps the students see the unseen, to test theoretical concepts, comprehend abstract ideas and communicate effectively. In the new paradigm of learning, the role of student is more important than teachers. Now a days there is democratization of knowledge and the role of the teacher is changing to that of facilitator. We need to have interactive teaching and this role of education is inevitable with the introduction of different innovative methods and multimedia technology.

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